## **CLAIMS**

What is claimed is:

1. A method comprising:

determining a position on a time scale of a buffer containing a plurality of data units; and

modifying a signal prompting selection of said buffer for release of at least one data unit of said plurality of data units based on said position on said time scale.

- 2. The method according to claim 1, wherein said network is an Asynchronous Transfer Mode Network.
- 3. The method according to claim 1, wherein said determining further comprises:

comparing a time parameter of said buffer with a current time counter value; and

incrementing a counter related to said signal if a difference between said current time counter value and said time parameter is greater than twice the value of a predetermined departure parameter.

4. The method according to claim 1, wherein said determining further comprises:

comparing a time parameter of said buffer with a current time counter value; and

decrementing a counter related to said signal if a difference between said current time counter value and said time parameter is lower than twice the value of a predetermined departure parameter.

5. The method according to claim 3, wherein said modifying further comprises:

asserting said signal if said counter reaches a set threshold value.

6. The method according to claim 4, wherein said modifying further comprises:

deasserting said signal if said counter reaches a reset threshold value.

- 7. The method according to claim 1, further comprising: selecting said buffer for release of said at least one data unit; and updating a time parameter of said buffer with a predetermined departure parameter.
- 8. The method according to claim 1, wherein said plurality of data units further comprises cells.

## 9. A system comprising:

a memory module for storing a plurality of buffers; and

a scheduler module for determining a position on a time scale of a buffer of said plurality of buffers, said buffer containing a plurality of data units and for modifying a signal prompting selection of said buffer for release of at least one data unit of said plurality of data units based on said position on said time scale.

- 10. The system according to claim 9, wherein said network is an Asynchronous Transfer Mode Network.
- 11. The system according to claim 9, wherein said scheduler module further compares a time parameter of said buffer with a current time counter value, and increments a counter related to said signal if a difference between said current time counter value and said time parameter is greater than twice the value of a predetermined departure parameter.
- 12. The system according to claim 9, wherein said scheduler module further compares a time parameter of said buffer with a current time counter value, and decrements a counter related to said signal if a difference between said current time counter value and said time parameter is lower than twice the value of a predetermined departure parameter.

- 13. The system according to claim 11, wherein said scheduler module further asserts said signal if said counter reaches a set threshold value.
- 14. The system according to claim 12, wherein said scheduler module further deasserts said signal if said counter reaches a reset threshold value.
- 15. The system according to claim 9, wherein said scheduler module further selects said buffer for release of said at least one data unit, and updates a time parameter of said buffer with a predetermined departure parameter.
- 16. The system according to claim 9, wherein said plurality of data units further comprises cells.

## 17. A system comprising:

means for determining a position on a time scale of a buffer containing a plurality of data units; and

means for modifying a signal prompting selection of said buffer for release of at least one data unit of said plurality of data units based on said position on said time scale.

- 18. The system according to claim 17, wherein said network is an Asynchronous Transfer Mode Network.
- 19. The system according to claim 17, further comprising:

  means for comparing a time parameter of said buffer with a current time
  counter value; and

means for incrementing a counter related to said signal if a difference between said current time counter value and said time parameter is greater than twice the value of a predetermined departure parameter.

20. The system according to claim 17, further comprising:

means for comparing a time parameter of said buffer with a current time
counter value; and

means for decrementing a counter related to said signal if a difference between said current time counter value and said time parameter is lower than twice the value of a predetermined departure parameter.

- 21. The system according to claim 19, further comprising means for asserting said signal if said counter reaches a set threshold value.
- 22. The system according to claim 20, further comprising means for deasserting said signal if said counter reaches a reset threshold value.

23. The system according to claim 17, further comprising:

means for selecting said buffer for release of said at least one data unit;

and

means for updating a time parameter of said buffer with a predetermined departure parameter.

- 24. The system according to claim 17, wherein said plurality of data units further comprises cells.
- 25. A computer readable medium containing executable instructions, which, when executed in a processing system, cause said processing system to perform a method comprising:

determining a position on a time scale of a buffer containing a plurality of data units; and

modifying a signal prompting selection of said buffer for release of at least one data unit of said plurality of data units based on said position on said time scale.

26. The computer readable medium according to claim 25, wherein said network is an Asynchronous Transfer Mode Network.

27. The computer readable medium according to claim 25, wherein said determining further comprises:

comparing a time parameter of said buffer with a current time counter value; and

incrementing a counter related to said signal if a difference between said current time counter value and said time parameter is greater than twice the value of a predetermined departure parameter.

28. The computer readable medium according to claim 25, wherein said determining further comprises:

comparing a time parameter of said buffer with a current time counter value; and

decrementing a counter related to said signal if a difference between said current time counter value and said time parameter is lower than twice the value of a predetermined departure parameter.

29. The computer readable medium according to claim 27, wherein said modifying further comprises:

asserting said signal if said counter reaches a set threshold value.

30. The computer readable medium according to claim 28, wherein said modifying further comprises:

deasserting said signal if said counter reaches a reset threshold value.

31. The computer readable medium according to claim 25, wherein said method further comprises:

selecting said buffer for release of said at least one data unit; and updating a time parameter of said buffer with a predetermined departure parameter.

32. The computer readable medium according to claim 25, wherein said plurality of data units further comprises cells.